

2007 Supplemental Wholesale Power Rate Case Initial Proposal

QUALIFICATION STATEMENTS OF WITNESSES

February 2008

WP-07-Q-BPA-58
Through
WP-07-Q-BPA-69



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**WP-07 SUPPLEMENTAL RATE PROPOSAL
WITNESS QUALIFICATION STATEMENTS**

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1 QUALIFICATIONS STATEMENT OF

2 RAYMOND D. BLIVEN

3 Witnesses for Bonneville Power Administration

4 *Q. Please state your name, employer and business address.*

5 A. My name is Raymond D. Bliven. I am employed by the Bonneville Power
6 Administration (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am BPA's Power Rates Manager. I am responsible for managing all aspects of BPA's
9 power rates and I am responsible for overseeing all facets of this rate case.

10 *Q. Please state your educational background.*

11 A. I received a Bachelor of Arts degree in Economics from Washington State University in
12 1975. In addition, I have taken course work at Portland State University, receiving a
13 Certificate of Middle East Studies in 1978. I also have completed graduate courses in
14 econometrics at Portland State University.

15 *Q. Please summarize your professional experience.*

16 A. From September 1980 through June 1994, I was employed by BPA on the rates staff. I
17 was initially an Economist in the Transmission Rates Section. In that position, I prepared
18 economic studies and analyses in support of BPA's transmission rate filings and designed
19 and wrote the computer programs supporting BPA's 1982 and 1983 Transmission Rate
20 Design Studies. I also worked on the Coincidence Study and the computer programs
21 necessary to prepare the Coincidence Study in BPA's 1982, 1983, 1985, 1987, 1991, and
22 1993 Wholesale Power Rate filings.

23 In November 1983, I moved to the Wholesale Rates Section, and later the Cost
24 Analysis Section, as a Public Utilities Specialist. In 1984, I extended the development of
25 the Rate Analysis Model (RAM), particularly in the modeling of new rate methodologies
26 for BPA's 1985 Wholesale Power Rate filing as outlined in section 7 of the Northwest

1 Power Act. In 1987, I was responsible for overall coordination of the RAM in BPA's
2 1987 Wholesale Power Rate filing and completed a major revision of the Nonfirm
3 Revenue Analysis Program (NFRAP) to incorporate flexible nonfirm pricing.

4 In 1988, I became an Industry Economist in the Revenue Forecasting Section.
5 My duties included forecasting fossil fuel prices, maintaining the NFRAP and
6 coordination of BPA's revenue forecasts and risk analyses. During this time, my duties
7 also included the modeling of the market in California for BPA's surplus power.
8 Between September 1990 and May 1991 and again from January 1992 through June
9 1994, I was Chief of the Rate Analysis Section, supervising the RAM, BPA's Revenue
10 Forecast, and the Risk Analysis. In addition, I was chief of the Power Rates Branch on
11 an acting basis during the last two months of the 1993 rate case, overseeing the
12 preparation of the Draft and Final Records of Decision, as well as all of BPA's final rate
13 proposal studies.

14 From June 1994 through January 2006, I was a consultant with Regulatory &
15 Cogeneration Services, Inc. of Vancouver Washington. The majority of my work during
16 that time was to consult with and represent industrial power users on issues relating to
17 wholesale power rates and products as well as terms, conditions, and rates for
18 transmission and ancillary services. I have also provided the industries assistance
19 relating to open access transmission services and pricing. I have participated in many
20 aspects of the development of Independent System Operators in California and the
21 Pacific Northwest.

22 Also during that time, I worked extensively in the field of market price and
23 resource development forecasting. I provided assistance to clients regarding market
24 conditions for resource development, long-range market price forecasts for use in
25 investment planning, and in generating plant valuation studies for use in acquisition
26 decision-making.

1 In January, 2006, I assumed my current position as BPA's Power Rates
2 Manager. In this position I oversee BPA's rates staff and the preparation and conduct of
3 all aspects of BPA's rates, rate cases, and rate implementation. My current duties are
4 focused on the development of tiering BPA's rates, a rate structure expected to be in
5 place for almost twenty years beginning in FY 2012. In addition, I am responsible for
6 many aspects of reforming BPA's Residential Exchange Program subsequent to rulings
7 by the U.S. Court of Appeals for the Ninth Circuit which invalidated exchange benefits
8 being paid settlement agreements.

9 *Q. Please state your experience as a witness in previous proceedings.*

10 A. In BPA's 1985 Wholesale Power Rate filing I filed written testimony and sponsored the
11 Rate Analysis Model. In BPA's 1987 Wholesale Power Rate filing I filed written
12 testimony and sponsored the NFRAP. Although I did not file written testimony, I was
13 responsible for BPA's 1989 Revenue Forecast Study, used in BPA's 1989 Wholesale
14 Power Rate filing to extend BPA's 1987 wholesale power rates. I was BPA's witness
15 sponsoring the revenue forecasts used in BPA's 1991 Variable Industrial Power Rate
16 filing. I filed written testimony as a part of three panels in BPA's 1991 rate filing: Cost
17 of Service Analysis/Rate Design Adjustments, Revenue Forecast, and Risk Analysis. In
18 BPA's 1993 rate case, I filed written testimony as a member of eleven panels, including:
19 Risk Analysis and Protection, Revenue Forecast, COSA, and Rate Design Issues.

20 In BPA's 1995 rate case, I filed written testimony on behalf of the Direct Service
21 Industries regarding power and transmission rate design, unbundled products and
22 ancillary services, and open access transmission tariffs. In BPA's 1996 and 2002 rate
23 cases, I testified on behalf of the Direct Service Industrials in all aspects of those cases,
24 concentrating on revenue requirements, rates and rate design, market and gas price
25 forecasting, average system costs and the implementation of BPA's statutory rate
26 directives including the 7(b)(2) rate test.

1 I have also filed written testimony before the Public Utilities Commission of
2 Maryland. I have assisted with filings by other witnesses on cases in Washington,
3 Oregon, and California and before the Federal Regulatory Energy Commission.
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1 QUALIFICATION STATEMENT OF

2 GLEN S. BOOTH

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Glen S. Booth. I am employed by the Bonneville Power Administration
6 (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am a Public Utilities Specialist for the Load Forecasting and Analysis Department in
9 Customer Support Services.

10 *Q. Please state your educational background.*

11 A. I received a Bachelor of Science degree in Agricultural Economics from Washington
12 State University in 1992 and a Master of Arts degree in Agricultural Economics from
13 Washington State University in 1994.

14 *Q. Please summarize your professional experience.*

15 A. In July of 1999, I began work at Salt River Project in the Corporate Pricing Department.
16 I performed annual corporate retail revenue forecasts for budgeting and planning
17 purposes, enhanced the Corporate Revenue Model System, and developed class level
18 billing determinants for utilization in the Project Rate Cases. In November 2001, I
19 transferred to the Engineering and Construction Services Department where I developed
20 cost metrics and reports for monitoring and forecasting capital expenditures.

21 In February 2003, I began work at Tucson Electric Power (TEP) in the Economic
22 Forecasting and Research Department. I developed hourly, daily, and monthly sales and
23 peak forecasts for the TEP system and the individual customer classes. The forecasts
24 expanded from one to twenty years forward. These forecasts were used in Integrated
25 Resource Plans, Rate Case proceedings, and for budget and planning purposes.

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Witness: Glen S. Booth

1 In May 2005, I began work at PacifiCorp in the Commercial and Trading
2 Division. I worked in the Load and Revenue Forecasting Department developing load
3 and revenue forecasts at the hourly, daily and monthly level. The forecasts expanded
4 from one day ahead to twenty years forward. These forecasts were used in Integrated
5 Resource Plans, Rate Case proceedings, Commercial Trading activities, and for budget
6 and planning purposes.

7 In April 2007, I began work at the Bonneville Power Administration in the Load
8 Forecasting and Analysis Department of Customer Support Services. I develop customer
9 level load and peak forecasts utilizing the Agency Load Forecasting system. These
10 forecasts expand one year to twenty years forward at the monthly level. The forecasts are
11 used for budget, planning and regional dialogue purposes.

12 *Q. Please state your experience as a witness in previous proceedings.*

13 *A.* For the 2005 PacifiCorp Integrated Resource Plan process, I participated in the
14 presentation and defense of customer load forecasts before Commission staff from
15 Washington, Idaho, Oregon, Utah, and Wyoming.

1 QUALIFICATION STATEMENT OF

2 ALLEN L. BURNS

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Allen L. Burns. I am employed by the Bonneville Power Administration
6 (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am the Vice President, Bulk Power Marketing for Power Services.

9 *Q. Please state your educational background.*

10 A. I received a Bachelor of Science in Electrical Engineering from the University of
11 Portland in 1977, and a Master of Science degree in Electrical Engineering from Arizona
12 State University in 1983.

13 *Q. Please summarize your professional experience.*

14 A. I was employed as an Electrical Engineer from 1978 through 1985 and held several
15 positions involving the planning and design of BPA's high voltage transmission grid.

16 From 1985 to 1987, I was the Chief of BPA's Structural and Electrical Design
17 Branch in the Division of Transmission Engineering.

18 From 1988 to 1994, I was Chief of the Transmission Branch, Division of
19 Contracts and Rates, where I was responsible for managing and directing the negotiation
20 of BPA transmission contracts, developing transmission policy, and developing and
21 establishing BPA's transmission rates for both main grid and intertie facilities.

22 I was the investor-owned utility (IOU) Segment Manager from May 1994 to
23 December 1995, and was responsible for all policies, products and services, and rate
24 issues related to BPA's Northwest IOU customers. I was BPA Trading Floor Manager
25 from 1996-1999 and responsible for the sales of BPA surplus power totaling \$500 to
26 \$600 million/year.

1 From 1999-2002 I held the position of Requirements Marketing Vice President,
2 and then in 2002 I was appointed Vice-President for Industry Restructuring; I held this
3 position until November 2005. My primary responsibilities include working on the
4 formation of a regional transmission provider for the NW Region. Since November
5 2005, I have held the position of Vice President for Bulk Marketing.

6 *Q. Please state your experience as a witness in previous proceedings.*

7 A. In 1996 I was on the Residential Exchange Panel, and in the early 90's, I was a witness
8 for the 7(i) proceedings on Third AC Non-Federal Participation. In 2000, I was the
9 policy witness for BPA'S WP-02 (FY 2002-2006) Rates.

1 QUALIFICATION STATEMENT OF

2 DANIEL H. FISHER

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Daniel H. Fisher. I am employed by the Bonneville Power Administration
6 (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am an Industry Economist in the Rates Design and Implementation group for Power
9 Services.

10 *Q. Please state your educational background.*

11 A. I received a Bachelor of Science degree in Economics/Management Science from the
12 University of California – San Diego in 2002.

13 *Q. Please summarize your professional experience.*

14 A. In March of 2004, I began work at Economic Insight Inc. as a staff economist for Samuel
15 Van Vactor. I worked as an analyst for the energy consulting side of the business as well
16 as a reporter for the Energy Market Report.

17 In September of 2005, I was hired into BPA's power rate group as an industry
18 economist. Since my hire at BPA, I have assisted with the WP-07 Wholesale Power Rate
19 Case, with primary focus on risk policy and the flexible PF program.

20 I have expanded the JIM (Jon's Impact Model) to fit a tiered rate design and have
21 been the lead on Tier 1 rate design for the post FY 2011 contract period. I am also one of
22 the primary analysts in pricing the Resource Support Services that BPA may offer as a
23 product choice in the post FY 2011 contract period.

24 *Q. Please state your experience as a witness in previous proceedings.*

25 A. I have never appeared as a witness in previous proceedings.

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1 QUALIFICATIONS STATEMENT OF

2 CHARLES W. FORMAN, JR.

3 Witness for Bonneville Power Administration

4 *Q. Please state your name, Employer and business address.*

5 A. My name is Charles W. Forman, Jr. I am employed by the Bonneville Power
6 Administration (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am the Project Manger for resolution of the rates and contracts issues raised by the
9 Ninth Circuit Court of Appeals on May 3, 2007 and subsequent rulings regarding BPA's
10 WP-02 power rates and the 2000 Residential Exchange Settlement Agreements. I am
11 responsible for overall management and coordination of the WP-07 Supplemental rates
12 proceedings, Average System Cost Methodology reconsultation and contract
13 development and implementation that comprise BPA's response to the rulings.

14 *Q. Please state your educational background.*

15 A. I received a Bachelor of Arts degree in Economics from the University of Oregon in 1977
16 and a Master of Arts degree in City and Regional Planning from Harvard University in
17 1981.

18 *Q. Please summarize your professional experience.*

19 A. From December 1981 through April 1994, I worked in various positions in load
20 forecasting and resource planning at Bonneville Power Administration (BPA). I was
21 initially an Economist in the Load Forecasting Section. In that position, I prepared or
22 reviewed individual customer load forecasts used for power, transmission and customer
23 service planning, and performed analyses in support of BPA's rate filings. I served as
24 Section Chief, Long Term Forecasting Section from the mid-1980's until April 1994.
25 The Long Term Forecasting Section was responsible for producing BPA's load and

1 power sales forecasts for resource planning purposes. I also represented BPA on the
2 Electric Power Research Institute Forecasting subcommittee for several years.

3 From April 1996 through April 2007 I served as an account executive working
4 with BPA's Preference, Direct Service Industries, and Investor Owned Utility customers.
5 Since May 2007 I have served as Project Manager for BPA's response to the Ninth
6 Circuit remands.

7 *Q. Please state your experience as a witness in previous proceedings.*

8 *A. I have never appeared as a witness in previous proceedings.*

1 QUALIFICATION STATEMENT OF

2 JANICE A. JOHNSON

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Janice A. Johnson. I am employed by the Bonneville Power Administration,
6 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am an accountant in the General Accounting group under Finance.

9 *Q. Please state your educational background.*

10 A. I earned a Bachelor of Science in Accounting from West Chester State University in
11 1991. In addition, I earned a Master in Business Administration from The University of
12 Phoenix in 2005. I became licensed as a Certified Public Accountant (CPA) in the state
13 of Virginia in 2005.

14 *Q. Please summarize your professional experience.*

15 A. From January 2000 to July 2003, I was employed with PacifiCorp as a revenue
16 accountant in the forecasting group. My primary responsibility was booking the unbilled
17 revenue accrual. In addition, I was responsible for monitoring the revenue system and
18 handling the reporting to departments. During the period July 2003 to July 2007, I held
19 various positions with Philip Morris USA where I audited wholesalers in the field and
20 subsequently worked in the compliance department in support of information technology
21 contracts. In July 2007, I began working as an accountant for Bonneville Power
22 Administration. In September of 2007, I became involved with Slice issues in
23 anticipation of assuming responsibility for reporting of actual costs in the annual Slice
24 True-up calculation. I am currently involved in the contract year 2007 Slice audit.

25 *Q. Please state your experience as a witness in previous proceedings.*

26 A. I have never appeared as a witness in previous proceedings.

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1 QUALIFICATION STATEMENT OF

2 MICHELLE L. MANARY

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Michelle L. Manary. I am employed by the Bonneville Power
6 Administration (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am the Supervisor of the Residential Exchange Program (REP) group for Corporate
9 Finance.

10 *Q. Please state your educational background.*

11 A. I graduated from Linfield College with a Bachelor of Science degree in Finance. I also
12 earned Master of Business Administration and Master of Public Administration degrees
13 from Willamette University in 1998.

14 *Q. Please summarize your professional experience.*

15 A. From 1993-1996 I was employed by International Sales, RTO in Tacoma, WA as the
16 Controller of the company. I have been employed by BPA since March of 1998 as a
17 Financial Analyst, the Supervisor of Power Finance, and the Supervisor of the
18 Residential Exchange Program.

19 I was involved in the Financial Choices process in 2002-2003. I was a member of
20 the Revenue Requirement team in the 2003 Safety Net Rate Case. I was responsible for
21 implementing the FB CRAC during the 2002-2006 rate period including the public
22 process involvement. I was in charge of providing quarterly Power Business Line
23 financial forecasts and framing related financial policy choices from 2002-2004. I was
24 the project manager for the Power Function Review I & II in 2004-2006. I was on the
25 Revenue Requirement team for the FY WP-07 Rate Case. I am currently in charge of the

1 Average System Cost Methodology Consultation and a member of the ASC Lookback
2 team for the WP-07 Supplemental Power Rate Case.

3 *Q. Please state your experience as a witness in previous proceedings.*

4 *A. I have never appeared as a witness in previous proceedings.*

1 QUALIFICATIONS STATEMENT OF

2 W. MICHAEL McHUGH

3 Witnesses for Bonneville Power Administration

4 Q. *Please state your name, employer and business address.*

5 A. My name is W. Michael McHugh. I am self-employed as a Financial and Economic
6 Consultant.

7 Q. *Please state your educational background.*

8 A. I received a Bachelor of Science Degree in Economics from Idaho State University in
9 1970, a Master of Science degree in Economics from the University of Washington in
10 1972 and a Ph. D in Economics from the University of Washington in 1975.

11 Q. *Please state your experience as a witness in previous proceedings.*

12 A. I have served as a witness in the following proceedings: Oregon Utilities Commission,
13 1977, Washington Transportation and Utilities Commission, 1983, Idaho Public Utilities
14 Commission, 1984, Federal Energy Regulatory Committee, and Idaho Power Company
15 (Idaho Power) Open Access Transmission Tariff (OATT), ER06-787, 2007.

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17 *Please refer to my resume for sources of additional qualifications.*
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Financial and economic consultant with extensive experience in the areas of financial analysis, strategic planning, resource planning, energy market analysis, business valuation, and economic impact assessment.

- Serves clients in a wide range of financial, regulatory, and strategic issues, especially in the areas of competitive positioning and marketing.
- Over 30 years experience consulting in the regional, national and international energy business
- Taught Economics at the University of Washington
- Consulted to most of the major electric and natural gas entities on the West Coast
- Testified before all Northwest utility commissions in the areas of rate impacts, need for power demand forecasting and prudence of resource programs
- Directly involved in every major electricity issue that has faced the West Coast over the last 30 years

Key Utility and Energy Consulting Engagements

- **Financial Analysis**
 - ❖ Financial Modeling
 - ❖ Financial Reporting, Management, and Forecasting
 - ❖ Financial Modeling (Integrated Income Statements, Balance Sheets, Cash Flow & Ratio Analysis)
 - ❖ Capital Budgeting Process
- **Market Analysis & Strategic Planning**
 - ❖ Strategic Planning (Chelan County PUD, Avista, Pacific Generating Company, etc)
 - ❖ Business Plans (e.g. PacifiCorp's IPP, Avista, etc.)
 - ❖ Market Analysis (Deregulation, water year, aluminum industry, etc.)
 - ❖ Rate Case – Industrial Margin, Risk, Rate Structure
 - ❖ Demand Modeling & Forecasting
 - ❖ Fish Mitigation and Financial Impacts (BPA, Chelan County PUD)
 - ❖ Environmental Impact Statements – Need for Power (e.g. Colstrip, Pebble Springs, etc.)
 - ❖ Electrical System Privatization (e.g. Philippines, New Zealand)
 - ❖ Energy Planning - (State of Alaska)
 - ❖ Natural Gas & Oil Price Forecasting (e.g. State of Alaska, Chelan County PUD, Imperial Irrigation District)
 - ❖ Risk Management (Identification, Assessment, Quantification, and Mitigation)
 - ❖ Risk Analysis (Arizona Public Service, Chelan County PUD, BPA)
- **Resources Development, Acquisition and Analysis**
 - ❖ Resource Acquisition Analysis (Wind, Energy Efficiency, Combustion Turbines,

- ❖ Coal plants, etc.)
 - ❖ Capacity expansion & economic dispatch models
 - ❖ Least Cost Planning (review of NW IOU's)
 - ❖ Mergers & Acquisitions (PacifiCorp/Utah Power, Puget & Washington Natural Gas, etc.)
 - ❖ Cost Effectiveness Studies
 - ❖ Hydro Relicensing
 - ❖ Hydro Operation & Simulation
 - ❖ Energy Efficiency
 - ❖ Generation Construction & Acquisition (Waste Management, Arizona Corporation Commission, etc.)
 - ❖ Energy Audits (State of Alaska)
 - ❖ Co-Generation (Waste Management, PacifiCorp etc.)
 - ❖ Power Contracts - (Canadian Entitlement Valuation (Chelan County PUD, etc.)
- **Transmission Access and Economic Feasibility**
- ❖ Transmission Line Economic Feasibility
 - ❖ Transmission Access and Assessment
 - ❖ Regional Transmission Organization (RTO) Assessment
- **Management and Oversight**
- Data Base Management (Structure, Flow, etc)
 - Utility Best Practices
 - Quality Control process, rules and guidelines
 - Educational Classes & Tools (Load forecasting and modeling techniques, project valuation, capital budgeting, financial statement analysis, etc.)

W. MICHAEL MCHUGH
Financial and Economic Consultant

Michael McHugh is a financial and economic consultant with extensive experience in the areas of resource planning, energy market analysis, business valuation, and economic impact assessment. Mr. McHugh serves clients in a wide range of financial, regulatory, and strategic issues, especially in the areas of competitive positioning and marketing.

Mr. McHugh has managed and directed numerous studies in the area of strategic planning and financial analysis.

EXPERIENCE

MARKET ANALYSIS

- Directed the development of the simulations models utilized in the estimation of the Long Run Marginal Cost of electricity for the **National Power Corporation** of the Philippines. The model and analysis is being used to estimate the market prices that will emerge as competition is introduced in the Philippines and the development of transition pricing.
- Developed the analytical framework utilized in the valuation of New Zealand's electricity generation resources. These valuations are being used as the basis for the sale of **ECNZ's** resources into the competitive market. Assessed impacts of move to competitive pool industry structure, estimated sustainable long-term and spot contract prices, reviewed capital and O&M cost forecasts.
- Developed the analytical framework utilized by an affiliate of **American Electric Power** in its bid preparation for the Yallourn coal fired generation facilities. The bid was part of the Australian privatization process. Developed methodology for analyzing complex revenue forecasting issues in new competitive pool market, including assessment of sustainable contract and spot sale prices. Provided primary operating cost/revenue input into valuation model for developing bid.
- Directed the analysis of the economic and financial impact of the wholesale bypass of portions of **Philadelphia Electric Company's (PECO)** service territory. The study entailed the quantification and valuation of alternative supply options relative to being supplied by PECO. The analysis included the assessment of the costs of alternative suppliers and transmission access, as well as the quantification of the stranded investment if PECO is bypassed.
- Developed international strategies and business plans for an independent power producer. Assessed firm financial objectives and risk tolerance, determined core competencies, screened global markets for locations meeting risk/return criteria, recommended joint venture role and potential partners.
- Developed business plan for entry of **Washington Natural Gas** into regional electricity markets. Identified strategic assets, reviewed immediate and long-term market issues, and produced business case.
- Assisted the **Iowa Utility Board** in the development of the rules relating to the development of energy efficiency programs by rate-regulated public utilities in Iowa. The proposed rules established the procedure for Board consideration of the recovery of energy efficiency expenditures.
- Directed the analysis and the negotiations of a long-term capacity and energy exchange contract, including transmission access. Researched resource needs, identified opportunities, and produced market assessment. Formulated contract offers and closing strategy.

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Witness: W. Michael McHugh

W. MICHAEL MCHUGH
Financial and Economic Consultant

- Directed the load resource analysis for a major utility. The engagement entailed the analysis of customer load profiles, customer class definitions price sensitivities, and the identification of new approaches to improve customer retention.
- Developed and taught courses focused on customer load profiling, customer class definition, load research, demand forecasting, conservation program impacts and rate design.
- Conducted load studies for a major electric utility. Developed the analytical methodology utilized in the development of customer load profiles. Identified desired detail and confidence levels, analyzed billing distributions by class, stratified classes, determined sample size, developed sampling and analysis plan. The study was utilized in customer classification and rate making.
- Directed the development of a data base management system and utility financial forecasting model. The model is currently being utilized to forecast the financial condition for 108 public and 8 investor owned utilities.
- Directs the review and evaluation of the Least Cost Plans of the major investor owned utilities in the Pacific Northwest. . The evaluation is being used in the determination of the prudence of resource acquisition and the long-run cost and the financial effects of the resource acquisition.
- Directed the analysis of the identification and qualification of environmental effects of alternative electricity generation or demand side options. The study involved the analysis of how Federal and State regulatory agencies are requiring energy producer's to internalize environmental effects.
- Directed the development of an Energy System Strategic Planning and Optimizing Model. The model is a detailed simulation model capable of simulating the monthly and seasonal operation of the hydropower system and its interaction with the alternative generation and conservation components (in place and planned) of the power system given alternative forecasts of demand. The models also address economic dispatch, capacity expansion, financial and rate impact. The model operates at both monthly and annual levels for a 20-year time horizon. The models are currently being utilized to forecast the supply configuration and financial position of the investor owned utilities in the Pacific Northwest.
- Arbitrator in an intertie access dispute between a major investor owned utility and a public reseller. The engagement involved the assessment of alternative proposals concerning the valuation of alternative offers relating to access provisions.
- Managed the Cost-Effectiveness Study (Least-Cost Plan) of (completing) **Washington Public Power Supply System's** nuclear power plants WNP-1, WNP-2, and WNP-3, which was mandated by the Washington State Energy Voter Approval Act of 1981. Applying state-of-the-art economic and engineering concepts, the analyses estimated the (marginal) cost of completing the plants and compared them to all other generation/ conservation options available to the Pacific Northwest. In addition, the analyses determined the environmental and social impacts of the construction and operation of the nuclear power plants compared to the alternatives.
- Authored and managed an all-fuels econometric/end-use demand forecasting model for the Pacific Northwest as a whole, each of the states, and seven economic sub-regions. The expected future aggregate demand for total energy and each of the fuels was forecasted for each consuming sector (including agriculture and transportation).
- Directed the energy modeling for the **State of Idaho** and assisted in the linkage of the energy model

to a state economic activity model. The model facilitated the process of estimating the impacts of economic growth and development policies on the expected future demand for energy resources.

- Managed the construction of several utility specific econometric energy forecasting models. These models involved the utilization of forecasting techniques ranging from basic trending to state-of-the-art econometric forecasting.

UTILITY PLANNING AND OPERATION

- Coordinated an energy audit of residential, commercial and public structures in Juneau, Alaska. The data was used in the modeling of the thermal characteristics of representative structures. These models were used to identify and quantify potential conservation measures, their cost-effectiveness and payback period.
- Assisted **Bonneville Power Administration's** Transmission Business Line in developing revenue-forecasting system. Specified business objectives and functional requirements for actual and forecasted revenue by product, customer, and contract.
- Directed a regional project to model comprehensively the resource plans, finances, and rates of all major Northwest utilities. Developed load/resource balance models, reviewed and revised load forecasts, developed resource stacks ordered by cost-effectiveness, projected long-term resource additions and financial impacts, analyzed key sensitivities.
- Assisted the **Bonneville Power Administration** in administering its rate equalization program. Identified regulatory and financial issues relating to public and private utilities program participation. Analyzed economic, legal, and political factors. Incorporated customer and party concerns to resolve complex program issues.
- Assisted clients in developing strategic marketing and business plans. Defined strategic business objectives, assessed customer needs, and researched customers' competitive alternatives.
- Developed an econometric model for the **City of Seattle** and the State of Washington to be used in estimation of the impact of alternative conservation programs on energy growth.
- Managed the analysis of the potential price induced electric energy conservation in the Pacific Northwest. The analysis included the quantification of the fuel substitution effects for various levels of petroleum supply and price.
- Managed the analysis of the economic and financial effects of the accelerated extraction of coal and subsequent closure of a high sulfur coal mine owned and operated by **American Electric Power**.
- For the Office of Financial Management of the **Bonneville Power Administration** provided the economic and financial assessment of the feasibility of BPA's portion of the Third AC Transmission Line. The analysis included the assessment of the Non-Federal participation (Northwest Utilities).
- For the Office of Financial Management of the **Bonneville Power Administration** provided the economic and financial assessment of the feasibility of the proposed inland intertie.

DEMAND MODELING AND CONSTRUCTION PROGRAMS

- Managed and coordinated the **Guam Power Authority's** short-term demand forecast.
- Managed and coordinated the **State of Arizona's** long-term demand forecast and analysis of the Pale Verde construction program.
- Directed the modeling and forecasting of future demand for all fuels in the Pacific Northwest under several scenarios describing differing constraints on petroleum product supplies and various price forecasts for OPEC crude oil. The work, undertaken for **NW Regional Commission**, forecasted the impact of OPEC pricing policies and estimated the potential for price induced petroleum conservation and resultant fuel substitution effects in the Pacific Northwest.
- Managed and coordinated the development of the **Alaska State** Long-Term Energy Plan. This project included the collection and verification of regional end-use data base, estimation of an econometric end-use forecasting model, quantification of conservation potential, examination of alternative electric generation strategies (e.g., wind, geothermal, etc.), natural resource planning (financial and environmental aspects), and development of an energy emergency contingency plan.

POWER PLANT SITING & RELICENSING

- Directed the analysis of the “Socioeconomic Study, Rocky Reach Hydroelectric Project – FERC Project No. 2145” for Chelan County Public Utility District.
- Prepared testimony concerning future electric energy consumption for several electric utilities. The testimony was used in energy facility siting, prudence, and/or rate hearings.

ENVIRONMENTAL IMPACT STATEMENTS

Directed the analysis of the “Need for Power” and “Conservation” sections of the Federal Environmental Impact Statement for the Colstrip Power Plants.

ANTITRUST LITIGATION

- Assisted in the preparation of the conceptual analysis for antitrust litigation in the fish processing and the hops industries. Aided in the formulation of the

economic arguments and data specification utilized in the cases.

MARKET ANALYSIS AND FINANCIAL FEASIBILITY

- Directed the analysis of the economic and socioeconomic value of the Aluminum Industry to the Pacific Northwest, the individual states, and counties. The study also addressed the breakeven points for the individual smelters given alternative electricity and aluminum prices.
- Directed the analysis of the world market and financial feasibility of ocean-going barges to be utilized in offshore oil drilling. The engagement entailed the developments of a detailed analysis of the world markets at the regional and local levels, the production of detailed proforma analysis, and the presentation of the economic and financial results to various financial institutions.
- Developed the methodology, analytical framework, and computer models to assist a major capital investment firm in their assessment of the market and financial feasibility of commercial real estate projects.
- Directed the analysis of the market and financial feasibility of products or enterprises such as:
 - Bottom fish
 - Timber and lumber
 - Minerals
 - Tourism
 - Ocean going barges
 - Racetracks
 - Destination resorts
 - Shopping centers
 - Commercial real estate
 - New medical products
 - Large thermal generation units
 - Small electricity generation plants
 - Solid Waste
 - Wind Farms

These studies ranged from assessment of the market potential to the financial feasibility and proforma analysis.

TESTIMONY

- Tax Analysis: Testified before the Alaska State Legislature's Joint Committee concerning the imposition of an ad valorem tax on the offshore fishing industry. The analysis of subsequent testimony dealt with the economic impact and the incidence of the tax.
- Regulatory Bodies: Testified before Utility Commissions in the States of

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Witness: W. Michael McHugh

W. MICHAEL MCHUGH
Financial and Economic Consultant

Oregon, Washington, Idaho, and Arizona in the areas of rate impacts, need for power, and prudence of resource programs.

PREVIOUS

EXPERIENCE:

North Bay Group, Board of Directors, 1991-1993

Morgan Systems, Board of Directors, 1989-1990

Arthur D. Little, Inc., Director of the Energy and Economic Practice, 1984-1987.

National Association of Security Dealers. Arbitrator --- 1983-1985.

Applied Economics Associates, Vice President, 1977-1984.

Mathematical Sciences Northwest, Inc., Senior Economist, 1976-1977.

Regional Impact Division, Office of Macroeconomics Impact Analysis, Federal Energy Administration, Washington, DC, 1975-1976.

Environmental Protection Agency, Economist, 1972-1975.

Instructor, University of Washington, Seattle, Washington, 1971-1976.

EDUCATION

BS, Idaho State University, Economics, 1970

MS, University of Washington, Economics, 1972

Ph.C., University of Washington, Economics, 1975 (All but dissertation)

PUBLICATIONS

“Socioeconomic Study, Rocky Reach Hydroelectric Project – FERC Project No. 2145” prepared for Chelan County Public Utility District, December 2000

"Safeguarding Radioactive High-Level Nuclear Waste: Compensating Host Communities," prepared for the Nye County, Nevada Board of Commissioners, December 1, 1998 (with Reed Hansen, Robert G. McGillivray, and Thomas Muller).

"An Emerging Center of Gravity for Washington State, An Analysis of Economic and Fiscal Impacts of High-Technology Manufacturing Facilities," Final Report, prepared for the Columbia River Economic Development Council, November 30, 1998 (with Reed Hansen and Robert G. McGillivray and Thomas Muller).

“Guam Power Authority – Short-Term Load Revenue Forecast” Prepared for the Guam Power Authority, November 1, 1998

“Privatization of the Philippines -- Long Run Marginal Cost” prepared for the National Power Corporation of the Philippines, 1997.

Open Access, Bypass and Stranded Investment: The Fly in the Ointment, Presented at the Electric Utility Business Environment Conference, March 30, 1994.

Historical and Forecasted Mineral Royalty and Severance Tax Revenues: Wyoming and Selected Local Governments. Peacekeeper Ballistic Missile System Fiscal Impact Analysis of Deployment in Wyoming and Nebraska, the Office of Economic Adjustment, Office of the Assistant Secretary of Defense, May 1984.

Washington State Energy Financing Voter Approval Act: Cost Effectiveness Study WNP-2 and WNP-3. Washington Public Power Supply System, Richland, Washington, August 1982.

State of Alaska Long-Term Energy Plan. State of Alaska, Department of Commerce and Economic Development, Division of Energy and Power Development, April 1981.

“Base Case Versus Conservation Alternatives in Regional Energy Demand Modeling,” in M.B. Carver and M.H. Hanaza, eds. *Simulation Modeling and Decision in Energy Systems*, ACTA Press, Anaheim, CA. 1979, pp. 112-117.

Energy Demand Modeling and Forecasting: Northwest Energy Policy Project. 1977.

W. MICHAEL MCHUGH
Financial and Economic Consultant

“Industry Mix and the Sensitivity of State Economics to Energy Price and Policy Changes.” *International Regional Science Review* with A. David Sandoval. 1976, pp. 56-70.

“Report to Congress on the Economic Impact of Energy Actions,” Federal Energy Administration, Washington, DC, PB 257-694, June 1976.

“Relative Environmental Vulnerability of OCS Regions to Oil and Gas Development,” Office of Economic Impact Analysis, Federal Energy Administration, July 1976.

Regional Industry Mix and Sensitivity to Energy Price and Policy Changes,” With A. David Sandoval, Office of Economic Impact Analysis, Federal Energy Administration, February 1976.

“Impacts on State Earnings of Alternative Oil Prices and Alternative Energy Strategies,” with A. David Sandoval, Office of Impact Analysis, Federal Energy Administration, December 1975.

“Economic Baseline for the Puget Sound” with Mike Scott and Robert Stokes, Washington State Department of Ecology, August 1975.

“The Economic Effects of Alaska Oil on PAD V.,” Federal Energy Administration, August 1975.

“The Economic Costs of Industrial Pollution Control,” With Eleanor Hungate and Michael M. Scott, Institute for Environmental Studies, University of Washington, December 1973.

“Cost of Emission Control Legislation on the Copper Industry,” Environmental Protection Agency, 1974.

“Cost of Emission Control Legislation on the Cement Industry,” Environmental Protection Agency, 1974.

“Cost of Emission Control Legislation on the Aluminum Industry.” Environmental Protection Agency, 1974.

W. MICHAEL MCHUGH
Financial and Economic Consultant

***REPRESENTATIVE
LIST OF CLIENTS***

American Electric Power
Arizona Corporation Commission
Arizona Public Service
AUS
Avista
Bear Valley Electric
BC Hydro
Bonneville Power Administration
Chelan County PUD
City Of Vernon
Deloitte and Touché
Deloitte Consulting
Electricity Corporation of New Zealand Ltd.
Guam Power Authority
Imperial Irrigation District
Iowa Utility Board
Montana Power and Light
Morgan Systems
Northbay Software
National Power Corporation of the Philippines
Northwest Power Planning Council
Office of Economic Adjustment, Office of the Assistant Secretary of Defense
Otter Tail Power Company
Pacific Gas and Electric
Pacific Generating Company
Pacific Northwest Utilities Conference Committee
Pacific Power and Light
Philadelphia Electric
Portland General Electric
Puget Sound Power and Light
Seattle City Light
Southern California Edison
State of Alaska, Department of Commerce and Economic Development, Division
of Energy and Power Development
Washington Natural Gas
Washington Public Power Supply System
Washington Utilities and Transportation Commission
Washington Water Power
Waste Management

1 QUALIFICATION STATEMENT OF

2 PAUL E. NORMAN

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Paul E. Norman. I am employed by the Bonneville Power Administration
6 (BPA), 905 NE. 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am the Senior Vice President, Power Services.

9 *Q. Please state your educational background.*

10 A. I graduated from Huxley College in 1974 with a Bachelor of Science degree in
11 Environmental Planning. I completed course work at Portland State University in 1980
12 for a Master of Science degree in Economics.

13 *Q. Please summarize your professional experience.*

14 A. From October 1975 to January 1982, I was an economist with the Army Corps of
15 Engineers in Portland, Oregon, where I conducted benefit/cost analyses for new
16 hydropower developments and other civil works projects. I also developed economic and
17 social impact sections of environmental assessments and developed national guidance for
18 Federal agency economic evaluation of power projects.

19 I have worked for BPA on a full-time basis since January 1982. From 1982 to
20 1985 I was assigned to the Resource Planning Division where I conducted and supervised
21 economic analyses leading to termination of WNP-1 and 3, among other projects. From
22 1986 to 1992, I was Chief of BPA's Planning Branch. One of the three sections under
23 my supervision prepared BPA's Resource Program plans. Another section evaluated
24 potential resource acquisitions under the Competitive Acquisition, Billing Credits,
25 Resource Contingency Unsolicited Resource programs. Another section conducted
26 policy analyses on a variety of resource and market issues. From February 1989 to July

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Witness: Paul E. Norman

1 1989, I was temporarily detailed to the Division of Power Supply where I served as
2 Deputy Director.

3 From May 1993 to May 1994, I was temporarily detailed to the Administrator's
4 Office where I managed the development of BPA's Competitiveness Project and Draft
5 Business Plan.

6 From May 1994 to August 1996, I was Segment Manager for BPA's
7 IPP/Marketer/Broker segment and then the Generating Publics segment. In these
8 positions I was responsible for BPA's business relationship with these customers as well
9 as the revenue results for the assigned customer segments.

10 From August 1996 to October 1996, I was a Power Senior Account Executive to
11 two of BPA's largest public utility customers and one moderate-sized customer. In these
12 positions I was responsible for BPA's business relationship and revenue results from
13 these customers.

14 From October 1996 to January 1999, I was Vice President for Power Sales and
15 Account Services. In that position, I was responsible for all power marketing, power
16 rates, power billing, contracts and three sales divisions.

17 Since January 1999, I have been the Senior Vice President for BPA's Power
18 Services organization. I am responsible for the generation, marketing and sale of power
19 with revenues of about \$2 billion per year from the sale of about 11,000 average
20 megawatts of power.

21 *Q. Please state your experience as a witness in previous proceedings.*

22 *A. I was a witness in the WP-96 rate case.*

1 QUALIFICATION STATEMENT OF

2 JULIA M. SHAUGHNESSY

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Julia M. Shaughnessy. I am employed by the Bonneville Power
6 Administration (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am a Public Utility Specialist in the Rates Design and Implementation group for Power
9 Services.

10 *Q. Please state your educational background.*

11 A. I received a Bachelor of Science degree in Civil Engineering from the University of Portland
12 in May, 1996.

13 *Q. Please summarize your professional experience.*

14 A. In July, 1996, I began work as a forensic engineer with Pacific Testing Laboratories
15 specializing in civil/structural failures and engineering analysis.

16 In July of 1998, I was hired into BPA's Transmission Services Structural Design
17 group as a contractor and in April 2001, I was converted over to federal status. I worked
18 as a design engineer for both the conductor and structural design groups, including
19 seismic mitigation.

20 In July of 2005 I transferred into the Rate Design and Implementation group as a
21 public utility specialist. I am the assistant process manager and logistics coordinator for
22 the WP-07 and WP-07 Supplemental rate cases. I was involved on the Tiered Rates
23 Methodology team and I am currently a member of the Average System Cost (ASC)
24 Methodology team for both the lookback and forward cookbook applications.

25 *Q. Please state your experience as a witness in previous proceedings.*

26 A. This will be my first experience as a witness.

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1 QUALIFICATION STATEMENT OF

2 RICHARD J. VAN ORDEN

3 Witness for the Bonneville Power Administration

4 *Q. Please state your name, employer, and business address.*

5 A. My name is Richard J. Van Orden. I am employed by the Bonneville Power
6 Administration (BPA), 905 NE 11th Avenue, Portland, Oregon.

7 *Q. In what capacity are you employed?*

8 A. I am a public utilities specialist for Customer Support Services in Corporate Services.

9 *Q. Please state your educational background.*

10 A. I received a Bachelor of Arts degree in Political Science from Lewis and Clark College in
11 1976. From Portland State University, I received a Master in Public Administration
12 degree in 1982 and a Doctor of Philosophy in Public Administration and Policy degree in
13 2001.

14 *Q. Please summarize your professional experience.*

15 A. In January of 1981, I began work at BPA in the Administrative Career Management
16 Program. The program featured rotational assignments across the agency including
17 Resource Acquisition and Development, Management Analysis, Conservation,
18 Engineering and Construction.

19 In 1986, I was promoted to a load forecasting position in the Snake River Area
20 office located in Walla Walla, WA where I prepared 20 year energy and peak load
21 forecasts for 18 customers. The forecasts were organized by point of delivery.

22 In 1998, I started work as a prescheduler in the Transmission Business Line. I
23 scheduled customers for the Northern Intertie and the Southwest markets.

24 I transferred to the Transmission Contracts and Business Assessment group in May 2003
25 and returned to work preparing customer level load forecasts. I prepared 10 year
26 forecasts for customers located in Western Oregon. The EPIP reorganization in October

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Witness: Richard J. Van Orden

1 2006 resulted in a move to my current position in Load Forecasting and Analysis. I am
2 responsible for Western Washington customer level load forecasts.

3 *Q. Please state your experience as a witness in previous proceedings.*

4 *A. I have never appeared as a witness in previous proceedings.*

1 QUALIFICATIONS STATEMENT OF

2 ROBERT E. YOUNG

3 Witnesses for Bonneville Power Administration

4 *Q. Please state your name, employer and business address.*

5 A. My name is Robert E. Young. I am managing Director of Economists.com, an
6 economic and financial consulting firm with offices in Portland, Oregon and Dallas
7 Texas. I founded the company in 1993.

8 *Q. Please state your educational background.*

9 A. I have a BA (1975) and MS (1976) in economics from Southern Illinois University.

10 *Q. Please state your experience as a witness in previous proceedings.*

11 A. I have prepared expert testimony for the Oregon Public Utility Commissioner, the Washington
12 Utilities and Transportation Commission, Bonneville Power Administration, Federal Trade
13 Commission, the International Court of Arbitration in London, England and Thurston County
14 Court.

15
16 *Please refer to my resume for sources of additional qualifications.*
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ROBERT E. YOUNG

**Managing Director
Portland, Oregon U.S.A.**

*“Finance and Performance Solutions for
Tomorrow’s Infrastructure Leaders”*



PROFESSIONAL EXPERIENCE

ECONOMISTS.COM
Managing Director

Portland, Oregon
1993 - Present

- Prepared a cost-of-service and rate design study for the Commonwealth Utilities Corporation in the Commonwealth of the Northern Marianas Islands (CNMI). Testified on numerous occasions before the CNMI legislature on electric rates and energy issues and worked closely with the current and previous CNMI government on energy policy.
- Prepared an economic impact study for the CNMI Strategic Investment Council on the effects of the loss of Japan Airline flights between Tokyo and Saipan, the largest island in the CNMI.
- Analyzed the effects of the sale of the Verizon telecommunications subsidiary in the CNMI to Pacific Telecommunications Incorporated.
- Prepared a cost-of-service and rate design study for the Palau Public Utilities Corporation.
- Currently assisting the Guam Power Authority with a rate case before the Guam Public Utilities Commission.
- Prepared an information technology strategic plan for the Guam Power Authority.
- Assisted Guam Power Authority with implementation of a web-based bill customer payment system.
- Assisted Comalco with analysis of acquisition targets.
- Advised **Intel** on emerging technology opportunities in electricity and gas industries. Summarized key business issues over next ten years, worked with Intel chief technology strategist to identify potential technology solutions, recommended marketing channels and roll-out strategies, developed briefing documents and training materials for energy industry solutions group.
- Provides economic, regulatory, financial and contractual analysis for all **Nordstrom** facilities in the US.
- Performed a review of **Snohomish PUD's** risk management practices, focused on energy risk management policies and procedures.
- Provided litigation support for **Snohomish PUD** in litigation before the FERC. Litigation focused on alleged overcharges, unreasonable contractual terms, and exercise of market power by certain power marketers during the Western power crisis of 2000-2001. Quantified economic impacts on clients, identified bounds for just and reasonable terms based on competitive market fundamentals and accepted industry practices, demonstrated compelling public interest to justify contract modification, outlined proposed remedies. Supported client counsel in case strategy, discovery and briefing.

Robert E Young.

- Assisted **BPA's Transmission Business Line** with realignment of their Fiber Optic Strategy. Suggested new contract terms, developed a financial model, assisted with contract negotiations.
- Advised **BPA's Transmission Business Line** on the effects of the new information economy on the demand for bandwidth nationally, identified trends that will affect the demand for use of BPA Fiber.
- Assisted **BPA's Transmission Business Line** with the development of a revised model for forecasting TBL revenue.
- Advised major European energy company on West-coast electric market economics and performed feasibility analysis on location of new generating capacity in the Pacific Northwest.
- Developed North American market strategy for **Alstom's** (now Areva) Energy Management and Markets business unit. EMM is a leading vendor of critical operations control and telecommunication systems for electricity and gas companies. Identified critical business issues facing Alstom's customers, assessed profitability and attractiveness of available segments of customer value chain, analyzed competing vendors, recommended break-out growth strategy. Developed business case tool and assisted in rollout of sales campaign. Drove major strategic alliance with global electronics manufacturer
- Assisted the **City of Portland** with determining the affects of utility deregulation on franchise fee revenues after Oregon Senate Bill 1149 was signed into law. Analyzed effect of volumetric approach to franchise fee collection on revenues and customer classes for SB 1149. Prepared report for City of Portland analyzing various volumetric franchise fee scenarios consistent with the provisions of SB 1149.
- Prepared and Expert Report and Reply Report before the International Chamber of Commerce, International Court of Arbitration. Mr. Young was chosen as an expert witness by **Kaiser Aluminum** in a contract dispute with another aluminum company.
- Provided acquisition integration assistance to the President of **US Generating Co.** for the transformation of the Boston, MA. office of the former J. Makowski & Associates into US Generating's first major regional office. Defined overall organizational structure for regional office, integrated and refined strategic direction and intent of consolidated organization, communicated results to Boston office staff.
- Successfully represented **Norsk Hydro Canada, Inc.**, (NHCI) owner of the largest magnesium plant in North America, in defense of a counter-veiling duty petition filed by a U.S. Magnesium producer. The petition argued that the variable rate power contract between NHCI and Hydro Quebec constituted a government subsidy. Prepared a report and briefed U.S. Commerce Department staff on utility rate design and cost allocation for large industrial customers and on the worldwide development and use of variable rate power contracts for large, nonferrous metal smelters. Presented Oral Argument before the Commerce Department during the hearings phase of this dispute.
- Successfully represented **Portland General Electric and the Washington Public Power Supply System and Public Service of Colorado** in the first regulatory proceeding to establish rates for disposal of Low Level Radioactive Waste. Presented testimony and exhibits on rate design and monopoly issues before the Washington Utilities and Transportation Commission (WUTC). Performed extensive econometric analysis rebutting testimony of intervener witness. Mr. Young's rate design proposal was adopted by WUTC in their final order. Provided additional support in appeal of WUTC decision by US Ecology to the District Court of Thurston County.

RESUME OF

Robert E Young.

- Performed comprehensive review of **Bonneville Power Administration's** (BPA) transmission rate schedules, transmission rate policies and transmission contract provisions for a large Canadian pulp and paper producer.
- Assisted an Independent Power Producer in preparation of responses to utility resource RFPs. Reviewed and analyzed responses public utility resources RFPs. Assisted in development and sale of a proposed wood-fuel resource in British Columbia.
- Assisted **PacifiCorp** in the development of their least-cost plan, Resource and Market Planning Program-3.
- Represented **Komatsu Silicon America** in the PGE/Enron merger hearing and in the PGE Customer Choice Pilot Program hearings.
- Negotiated open market electric power sales contracts under PGE's Customer Choice Pilot Program for **Komatsu Silicon America** and **Integrated Device Technology**. Assisted **NEC America** with contract negotiations and analysis for an open market electric power sales contract.
- Reviewed cable TV rate filings for a variety of cities across the US. Analyzed rate design, cost allocation and rate of return for compliance with FCC regulations.
- Assisted **BPA** in preparation of its Business Plan Environmental Impact Statement (BPEIS). Faced with continuous radical changes in the electric utility industry, BPA engaged in an intensive and thorough review of its business strategy. The result was BPA's Business Plan and the associated BPEIS, which were published in 1995. The BPEIS was used as the basis for several BPA Record of Decisions including new transmission agreements for BPA's large industrial customers (DSIs). These new contracts were challenged at the 9th Circuit Court of Appeals by a group of BPA customers and others. The 9th Circuit affirmed BPA's right to offer new transmission agreements and the validity of the BPEIS.

DELOITTE CONSULTING
Manager, Northwest Practice

Portland, Oregon
1987-92

- Managed consulting team of over 15 financial analysts, auditors and economists to assist **Bonneville Power Administration** (BPA) in administering the Average System Cost rate equalization program. This program distributes over \$150 million annually to Northwest utilities for equalizing residential electric rates. Identified regulatory and financial issues relating to participating public and private utilities, analyzed economic, legal, and political factors. Incorporated customer and party concerns in successfully resolving complex issues facing the program. Reviewed and analyzed over 75 cost allocation and rate design studies for compliance with Average System Cost Methodology procedures.
- Managed the development of the Financial Strategy for **Bonneville Power Administration**. This strategy was used as the basis for the development of BPA's long-term financial plan, resulting in positive Net Revenues (retained earnings) for the first time in over 10 years.
- Directed an analysis to determine the price for sale of long-term transmission rights for **BPA**. Identified highest value transactions over the line, determined net benefits, evaluated private opportunity costs, considered market constraints on pricing, assessed regulatory and technological risks, developed positions on financing and contractual issues.

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Witness: Robert E. Young

Robert E Young.

- Prepared an economic and financial analysis of a proposed long-term sale of power to a large investor-owned utility for **BPA**. Participated in negotiations between BPA and the utility.
- Managed a study comparing costs of transmission operations and maintenance activities at five large North American utilities. Conducted on-site visits, developed engineering and accounting information on a consistent basis across utilities, analyzed system characteristics, compared key practices and performance measures. The project involved the detailed analysis of costs and cost allocations in order to restructure each utility's costs on a comparable basis.
- Developed and presented the following training classes: Principles of Utility Accounting, Economics and Rate Design; Accounting and Finance for Non-Financial Managers; and, Cost of Service Study Design and Development. These classes have been taught several times to utilities throughout the Pacific Northwest. Total in-class hours exceed 400.

Complex Litigation Support

- Managed appeals of rate proceedings before the Federal Energy Regulatory Commission (FERC) and the 9th Circuit Court of Appeals for **Bonneville Power Administration**. Managed consulting and technical staff in discovery, testimony analysis, and testimony preparation and settlement negotiations.
- Managed a project for the **U.S. Department of Justice** to evaluate a potential damage liability scenario prepared by Washington Public Power System stemming from bondholder litigation to reallocate plant construction costs. A subsequent project included a review of the construction contracting process and contract accounting process. A comprehensive workplan was developed to determine the method of incremental costing risk and potential exposure.

DIRECT SERVICE INDUSTRIES, INC.
Director of Rates and Technical Issues

Portland, Oregon
1983 -1986

- Responsible for the coordination of policy analysis on all energy issues affecting member companies of Direct Service Industries, Inc., a trade association consisting of 11 members with 15 energy intensive plants whose annual electric energy cost exceeds \$700 million per year at full production. Surplus power accounts for about 25% of the DSI rates from BPA.
- Directed the technical effort that resulted in successful implementation of a variable electric power rate for Northwest aluminum smelters. Testified as an expert witness in this proceeding.
- Provided litigation support on over twenty lawsuits involving implementation of the Pacific Northwest Electric Power Planning and Conservation Act, BPA rate decisions and Average System Cost Decisions.
- Participated in the preparation of several special studies on the economic effects and competitive position of the Northwest aluminum industry.
- Directed the technical effort on the development of an Industrial Conservation Program for Northwest aluminum smelters. This program has distributed over \$60 million for smelter conservation/modernization programs.

RESUME OF

Robert E Young.

- Prepared testimony and exhibits on rate design, cost allocation, revenue requirements and other issues on behalf of Direct Service Industries, Inc in BPA rate proceedings.

PORTLAND GENERAL ELECTRIC COMPANY

Rate Analyst

Portland, Oregon

1979 – 1982

- Developed 20-year generation-expansion model to determine the need for future generating resources. Linear Programming techniques were used to develop the least-cost supply of resources and the marginal cost of capacity and energy for use in PGE's marginal cost analysis. Presented papers on this topic to academic and professional associations.
- Member of the Northwest Power Planning Council's Resource Planning Advisory Committee. Advised Council staff on selection of consultant to design and develop and implement least-cost planning model.
- Designed electric rates and prepared cost-of-service studies.
- Developed avoided cost studies and analyzed potential cogeneration projects.
- Prepared testimony and exhibits on the above issues before the Oregon Public Utility Commissioner.

KANSAS CITY POWER AND LIGHT COMPANY

Rate Analyst

Kansas City, Mo.

1976 - 1979

- Prepared cost-of-service and rate design studies for use in regulatory proceedings before two state commissions and the Federal Power Commission.
- Developed econometric and end use forecasting model for residential customers.

PUBLICATIONS

List of publications and professional presentations provided upon request.

**PROFESSIONAL
MEMBERSHIPS**

International Association for Energy Economics
Western Energy Institute Board of Directors 2003 - 2006
American Nuclear Society
National Association of Forensic Economics

RESUME OF

Robert E Young.

**CIVIC
ACTIVITIES**

Ainsworth Public School Foundation
Co-Chair Board of Directors 2003 - 2005
Board of Directors, 2002 - 2005

Oregon Ballet Theatre
Treasurer, Board of Directors, 1992 - 1993
Board of Directors, 1989 - 2002

Pacific Ballet Theatre
Vice-President, Board of Directors, 1986-1988
Treasurer, Board of Directors, 1985-1986
Board of Directors, 1984-1985



“Finance and Performance Solutions for Tomorrow’s Infrastructure Leaders”

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